

January – February 2004

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2003 HIV/AIDS Summary

In 2003, 15 HIV (non-AIDS) cases and seven AIDS cases were reported to the North Dakota Department of Health. These cases included individuals previously diagnosed in other states who moved to North Dakota during calendar year 2003, as well as newly diagnosed (incident) HIV cases.

North Dakota has one of the lowest rates of HIV infection in the United States. Because of the relatively low number of HIV infections, it is important to be aware that minor changes in the number of reported cases can result in significant changes in rates.

Nineteen of the HIV and AIDS cases reported in 2003 were male; three were female. The mean age at diagnosis was 36 years. Fifteen were white, four were American Indian and three were black. Ten identified male-to-male sexual contact as the primary risk factor for infection, five reported injecting drug use, five reported heterosexual contact with a person at risk of HIV, one reported a blood transfusion prior to 1985 and one had no identified risk.

Incident HIV case analysis provides a clearer and timelier description of HIV's impact in the state for prevention planning purposes. An incident HIV case includes an

individual living in North Dakota who is initially diagnosed with HIV infection (non-AIDS) or who progresses to AIDS within the same calendar year of his or her HIV diagnosis. Incident cases also include those infections that had not been previously reported elsewhere in the United States or in states which have non-name reporting. Determination of the HIV diagnosis does not indicate where transmission of infection may have occurred.

Nine incident HIV cases were diagnosed in North Dakota residents in 2003 (Table 1). Five of the nine cases also had infections that were advanced enough to meet the diagnostic criteria for AIDS. These cases learned for the first time of their HIV infection when they were informed they had AIDS.

Of the incident HIV cases diagnosed during calendar year 2003, the mean age at HIV diagnosis was 42.8 years. Eight were male; one was female. Seven were white; two were black. Four identified male-to-male sexual contact as their primary risk factor for infection, two reported heterosexual contact with a person at risk, one reported injecting drug use, one reported a blood transfusion prior to 1985 and one had no identified risk.

Table 1. New HIV diagnoses* and rates among people in North Dakota by race/ethnicity and gender, 2003

Race/Ethnicity	Males			Females			Total		
	No.	%	Rate**	No.	%	Rate**	No.	%	Rate**
White, not Hispanic	7	88	2.4	0	0	0	7	78	1.2
American Indian	0	0	0	0	0	0	0	0	0
Black, not Hispanic	1	12	41.2	1	100	65.4	2	22	51.0
Hispanic	0	0	0	0	0	0	0	0	0
Total	8	100	2.5	1	100	0.3	9	100	1.4

*Note: This data includes only those people who were residing in North Dakota at the time of initial diagnosis.

**Per 100,000 population

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Publication is available in alternative forms; for more information, contact Editor, *Epidemiology Report*.

Publication also appears on the department's home page at <http://www.health.state.nd.us>

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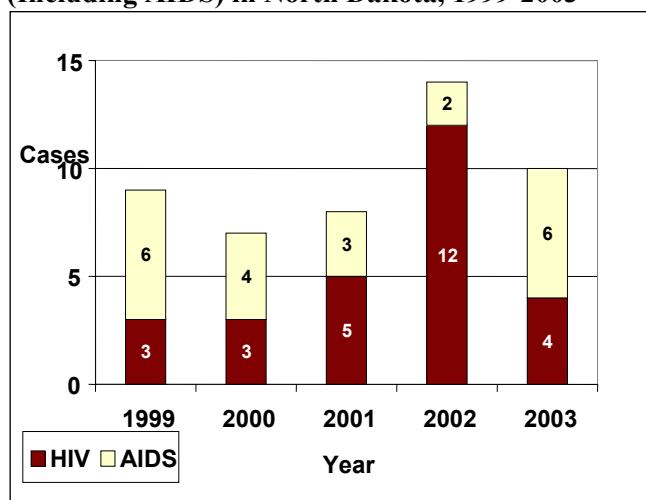
The rate of incident HIV cases in North Dakota was 1.4 per 100,000 population in 2003. The rate for males was about eight times higher than that for females (2.5 per 100,000 compared with 0.3 per 100,000). Rates were highest for blacks (51 per 100,000) compared with whites (1.2 per 100,000). Rates for both black males and black females were highest (41.2 per 100,000 and 65.4 per 100,000, respectively) than any other racial/ethnic group.

The HIV rate among blacks is disproportionately high. A primary reason for the higher rate among blacks is the recent refugee resettlement to North Dakota of individuals from African countries with high HIV prevalence. These individuals arrive in North Dakota with pre-existing infections, but are classified as North Dakota incident HIV cases because they were never diagnosed or reported in the United States.

New HIV Diagnoses (Including AIDS) by Year, North Dakota, 1999-2003

From 1999 through 2003, 48 new HIV cases (including AIDS) were diagnosed in North Dakota residents (Figure 1). During this period, 33 percent (16/48) of the individuals met the case definition of AIDS at the time of their HIV diagnosis.

Figure 1. Annual Number of New HIV Diagnoses (Including AIDS) in North Dakota, 1999-2003



White males continue to comprise the greatest percentage of reported HIV cases in North Dakota. White males accounted for 73 percent of new diagnoses from 1999 through 2003 (Table 2). The number of blacks residing in North Dakota diagnosed with HIV increased slightly from the previous five-year period. Closer examination of cases among blacks reveals that nine of the 13 newly diagnosed cases from 1999 through 2003 were refugees who resettled in North Dakota from African countries with high HIV infection rates.

Table 2. Characteristics of HIV (HIV and AIDS) diagnoses in North Dakota, 1999-2003 and 1994-1998

	1999-2003		1994-1998	
	No.	%	No.	%
Total	48	100	48	100
Male	35	73	42	75
Female	13	27	14	25
Race/Ethnicity				
White, not Hispanic	35	73	41	73
American Indian	4	8	7	13
Blac, not Hispanic	8	17	5	9
Hispanic, all races	1	2	3	5
Age group (years)				
>12	1	2	1	2
13-19	1	2	1	2
20-29	12	25	10	18
30-39	12	25	27	48
40-49	16	33	13	23
50-59	6	13	2	4
60+	0	0	2	4
Risk Factor				
Male-to-male sexual contact (MMS)	19	39	22	39
Injecting drug use (IDU)	6	13	5	9
MMS/IDU	1	2	2	3
Heterosexual contact	11	23	15	27
Mother with HIV	1	2	1	2
Other/Risk not specified	10	21	11	20

From 1999 through 2003, those between 20 and 29 years of age and 40 and 59 years of age accounted for 25 percent and 46 percent, respectively, of new diagnoses. From 1994 through 1998, these age groups accounted for 18 percent and 27 percent, respectively, of newly diagnosed cases. The increase in the percentage of diagnoses in the age 20 to 29 group may be the result of increased efforts to encourage HIV testing among that age group from 1999 through 2003. However, the increase in diagnoses in the 40 to 59 age group from 1999 through 2003 resulted primarily from individuals learning their HIV status at the time of their AIDS diagnosis. The stigma of HIV may have been responsible for people delaying seeking medical care and HIV testing until serious health conditions arose, resulting in their HIV infections not being identified prior to their AIDS diagnosis. Continued efforts are necessary to encourage people at risk of HIV infection to be tested. Early identification of infection is important to initiate treatment and intervention for prevention of disease transmission.

Male-to-male sexual contact and heterosexual contact with a person at risk continue to be the most frequently identified risk factors for transmission of HIV in North Dakota.

Cumulative (1984-2003) HIV/AIDS Cases, North Dakota

HIV and AIDS have been reportable conditions in North Dakota since 1984. The reported infections include cases that were newly diagnosed in the state, as well as cases that were diagnosed elsewhere and moved to North Dakota.

As of Dec. 31, 2003, 324 HIV/AIDS cases have been reported in North Dakota. Of the reported cases, 57 percent (185/324) are known to have been diagnosed as AIDS, and 37 percent (120/324) are known to have died.

Of the 324 reported HIV/AIDS cases:

- 85 percent were male; 15 percent were female.
- 52 percent identified male-to-male sexual contact as a risk factor.
- 69 percent were between the ages of 20 and 39 at diagnosis.
- 78 percent (253) were white, 11 percent (37) were American Indian, 8 percent (25) were black, 2 percent (8) were Hispanic, and 0.3 percent (1) were Asian/Pacific Islander.

Estimates indicate that there are about 116 people living with HIV in North Dakota at the end of 2003. Approximately 73 percent are between the ages of 30 and 59.

⚡ For more information about HIV, visit the NDDoH website at www.ndhiv.com.

2003 Tuberculosis Epidemiology Report

Tuberculosis in North Dakota – 2003

In 2003, six tuberculosis (TB) cases were reported in North Dakota. With an incidence rate of 0.9 per 100,000, North Dakota continues to be considerably below the national rate (Figure 2).

Two of the tuberculosis cases were pulmonary, three were extra-pulmonary and one was pulmonary/extra-pulmonary. Extra-pulmonary cases involved the following sites:

- Pericardium
- Intestinal tract (ileocecum)
- Cervical lymph node
- Lumbar spine

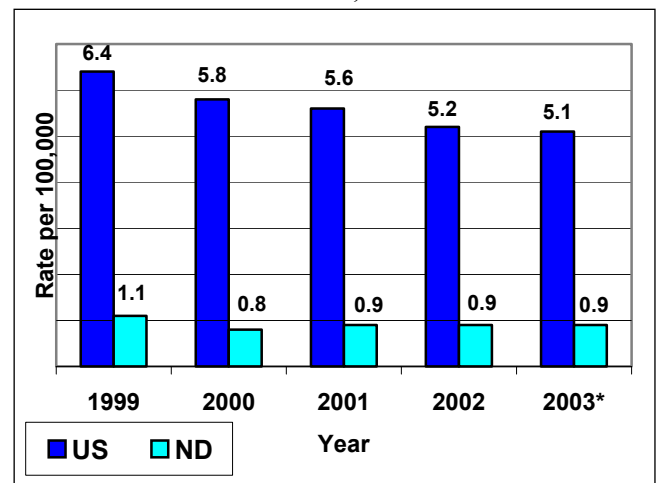
The ages of the tuberculosis cases ranged from 21 to 78 years of age, with a median age of 65 years. Three cases were white, one was American Indian, one was black and one was Asian.

Risk factors associated with tuberculosis in 2003 included:

- Being a contact to active tuberculosis disease.
- Belonging to a high-risk racial/ethnic group.
- Being foreign-born.
- Having prior tuberculosis infection.

No tuberculosis-related deaths were reported in 2003.

Figure 2. United States and North Dakota Tuberculosis Disease Rates, 1999-2003



Tuberculosis in North Dakota – 1999-2003

From 1999 through 2003, 30 cases of tuberculosis were reported in North Dakota. The number of annual tuberculosis cases ranged from five to seven, resulting in an incidence rate between 0.8 and 1.1 per 100,000.

Of the 30 cases, 15 were pulmonary (50%), 13 were extra-pulmonary (43%) and two were pulmonary/extra-pulmonary (7%). Sixty-seven percent of the tuberculosis cases were 50 years of age and older. The mean and median ages of tuberculosis cases during the past five years were 49 and 56 respectively. As shown in Figure 3, the median age in 2002 was lower than in previous years. This is due to the diagnosis of disease in four adults between the ages of 21 and 25 years.

The race/ethnicity of tuberculosis cases during the past five years shows a disproportionately high number of the cases reported among minority populations. Cumulatively, American Indians, blacks and Asians account for only 6 percent of North Dakota's population but 50 percent of the states' reported TB cases (Figure 4).

Figure 3. Mean and Median Ages of Tuberculosis, North Dakota, 1999-2003

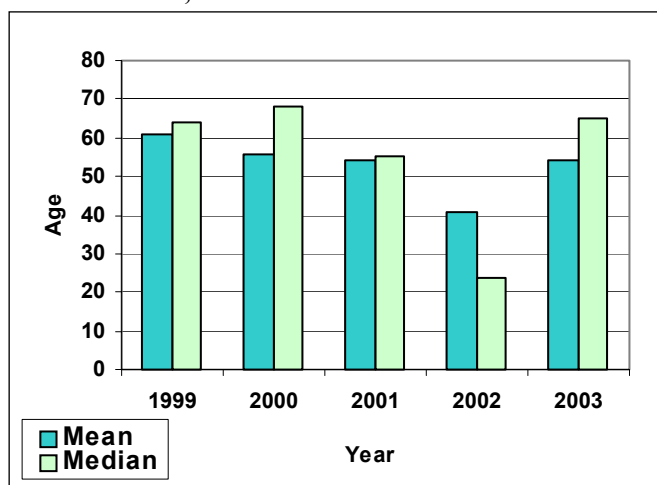
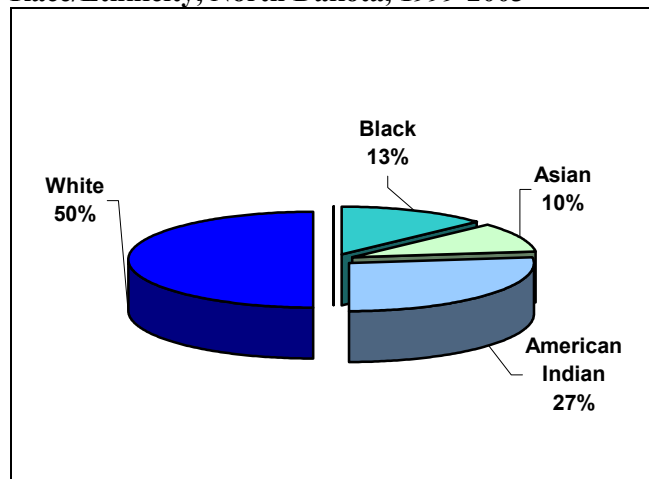


Figure 4. Percentage of Tuberculosis Cases by Race/Ethnicity, North Dakota, 1999-2003



An increase in the state's racial/ethnic populations during the past few years has contributed to the increased number of tuberculosis cases reported in these racial/ethnic groups. While the number of foreign-born people in the state represents less than 2 percent of the state's total population, it increased 29 percent between 1990 and 2000.

Drug-Resistant Tuberculosis

Drug resistant tuberculosis (DR-TB) and multi-drug resistant tuberculosis (MDR-TB) present difficult problems for tuberculosis control. This is due to the complicated treatment regimen for the index case and the treatment of latent tuberculosis infection in contacts to the index case. The contact's treatment regimen must be individualized based on the index case's medication history and drug susceptibility studies.

With the increase in foreign-born populations entering the United States and North Dakota, the potential exists for an increase of DR-TB. During the past five years, however, there have been no cases of multidrug-resistant

tuberculosis identified in North Dakota. Furthermore, only one case of single-drug resistance has been identified: an isolate in 2002 was resistant to streptomycin.

Latent Tuberculosis Infection

Latent TB infection (LTBI) occurs when individuals are infected with *M. tuberculosis* bacteria through direct exposure to active tuberculosis disease.

People with infection do not have active disease and are not infectious. Clinical findings of LTBI normally include a positive tuberculin skin test, absence of symptoms and a normal chest x-ray.

The number of tuberculosis infections reported in North Dakota has decreased since the year 2000 (Table 3). This is due in part to a decrease in the number of refugees entering North Dakota since 2001.

Table 3. Reported Cases of LTBI North Dakota, 1999-2003

1999	2000	2001	2002	2003
450	572	368	304	312 ¹

¹Provisional data.

If you have questions about the Tuberculosis Program, medications or testing, the following table provides a list of contacts.

Contact	Title	Phone
Karin Mongeon	Program Manager	328.2378
Paula Mosbrucker	TB Epidemiologist / Consultant	328.2378
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Eric Hieb	Public Health Lab - TB Testing	328.5262



Click below to link to the NDDoH TB website.



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Summary of Selected Reportable Conditions			
North Dakota, January – February 2003/2004			
Reportable Condition	January-February 2004*		January -February 2003
Campylobacteriosis	6		3
Chlamydia	256		193
Cryptosporidiosis	0		0
<i>E. coli</i> , shiga toxin positive (non-O157)	3		1
<i>E. coli</i> O157:H7	1		1
Enterococcus, Vancomycin-resistant (VRE)	3		5
Giardiasis	2		12
Gonorrhea	20		7
Haemophilus influenzae (invasive)	0		1
Hepatitis A	0		0
Hepatitis B	1		0
HIV/AIDS	4		4
Legionellosis	0		1
Lyme Disease	0		0
Malaria	0		0
Meningitis, bacterial ¹ (non meningococcal)	0		1
Meningococcal disease	0		0
Pertussis	3		1
Q fever	0		0
Rabies (animal)	10		12
Salmonellosis	6		6
Shigellosis	1		3
<i>Staphylococcus aureus</i> , Methicillin-resistant (MRSA)	181		229
Streptococcal disease, Group A ² (invasive)	3		5
Streptococcal disease, Group B ² (infant < 3 months of age)	0		0
Streptococcal disease, Group B ² (invasive ³)	6		3
Streptococcal disease, other ² (invasive)	0		0
Streptococcal pneumoniae ² , (invasive, children < 5 years of age)	0		2
Streptococcal pneumoniae ² (invasive ⁴)	12		12
<i>Streptococcus pneumoniae</i> ² , drug resistant	0		3
Tuberculosis	0		0
West Nile Virus Infection	0		0

*Provisional data

¹ Meningitis caused by *Staphylococcus aureus* and *Streptococcus pneumoniae*.

² Includes invasive infections caused by streptococcal disease not including those classified as meningitis.

³ Includes invasive infections of streptococcal, Group B, disease in persons \geq 3 months of age.

⁴ Includes invasive infections caused by *Streptococcus pneumoniae* in persons \geq 5 years of age.